Homework 10b Questions and Answers

1. Consider the following situations and determine whether they exhibit simultaneous consumption, network effects, x-inefficiency or rent-seeking behavior. Assume the businesses referenced function as monopolies.

(a) A pharmaceutical company discovers a vaccine for the common cold. The company puts a significant effort into tests to get it FDA-approved and into hiring lawyers to obtain a patent.

(b) An Internet service provider adds thousands of new customers.

(c) The head of a family-owned, major hotel chain decides to hire his wild, socialite niece to work as an executive of the company after her reality TV career ends.

(d) An online profile company helps college and high school students from across the country to connect with each other.

(a) This is an example of rent-seeking behavior. The pharmaceutical company is putting a large amount of resources into making the drug marketable and to gain exclusive rights for the drug. Obtaining this will likely cause the firm to gain significant profits.

(b) This situation exhibits simultaneous consumption. Once the firm offers Internet services to one customer, it is easy for it to add production for additional customers at little or no marginal cost, so average total cost declines.

(c) This example exhibits X-inefficiency. Hiring an irresponsible relative likely has personal motivations for the executive and likely won’t benefit the efficiency of the firm. This will put the ATC at a higher level than it would be if the relative was not hired, resulting in x-inefficiency.

(d) This example exhibits networking effects. The site becomes more and more attractive to join and the larger the pool of users and schools becomes, the better service the site provides.

[text: E pp. 212-213; MI pp. 212-213]

2. Explain the relationship between the price elasticity of demand and price discrimination. Give two examples.

Price discrimination is often used when there are different elasticities of demand among buyers of a product. For example, phone rates during a business day are higher than phone rates at night and on weekends because demand is relatively more inelastic during the day and relatively more elastic during the evenings and on weekends. As another example, movie theaters charge higher prices during the evening when the demand is relatively inelastic and charge lower prices during the day when demand is relatively more elastic. [text: E pp. 214-215; MI pp. 214-215]

3. In the table below are cost and demand data for a pure monopolist.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Quantity demanded** | **Price** | **Marginal revenue** | **Average cost** | **Marginal cost** |
| 0 | $105.00 |  |  |  |
| 1 | 96.00 | $ 96.00 | $144.00 | $144.00 |
| 2 | 87.00 | 78.00 | 90.00 | 36.00 |
| 3 | 78.00 | 60.00 | 70.34 | 30.00 |
| 4 | 69.00 | 42.00 | 63.00 | 42.00 |
| 5 | 60.00 | 24.00 | 60.00 | 48.00 |
| 6 | 51.00 | 6.00 | 58.50 | 51.00 |
| 7 | 42.00 | –12.00 | 57.86 | 54.00 |
| 8 | 33.00 | –30.00 | 57.50 | 55.50 |
| 9 | 24.00 | –48.00 | 57.33 | 56.00 |

(a) What is the level of price, output, and amount of profit for an unregulated monopolist?

(b) Using the data in the table, what are the price, output, and profit for a regulated monopolist that sets price equal to marginal cost compared with an unregulated monopolist?

(c) Using the data in the table, what are the price, output, and profit for a regulated monopolist that charges a “fair-return” price compared with an unregulated monopolist?

(d) Analyze the effect of regulation on the allocation of resources. Which situation is most efficient? Which situation is most likely to be chosen by government? Why?

(a) The unregulated monopolist will charge a price of $69, produce 4 units, and make a profit of $24.

(b) The regulated monopolist in this case would set price equal to $51, produce 6 units of output, but would have economic losses of $45.

(c) The regulated monopolist in this case would charge a price of $60, produce 5 units of output, and make no economic profits.

(d) The most efficient situation would be where the price was set equal to marginal cost. The price reflects what society is willing to pay and the marginal cost for producing another unit. That situation, however, produces a loss for the firm of $45, which the government would have to subsidize an unpopular policy. Therefore, the government is most likely to select “fair-return” pricing where AC is equal to MC. The firm neither makes an economic profit nor incurs a loss. The output level is greater than a situation where the firm is unregulated.

[text: E pp. 216-217, 219; MI pp. 216-217, 219]

4. (Last Word) How was the original DeBeers diamond company an example of classic monopoly behavior? How did it manipulate demand and supply?

De Beers produces about 45 percent of all rough-cut diamonds in the world and buys for resale many of the diamonds produced elsewhere. It markets about 55 percent of the world’s diamonds. The price and output decisions of this original firm fit the monopoly model. It controlled the supply of a large portion of the diamond market. Thus it was able to sell a limited quantity of diamonds to yield an “appropriate” monopoly price that was well over production costs. The firm earned monopoly profit.

On the demand side, when demand decreased, it reduced diamond sales to maintain the most profitable price. It also tried to increase demand through advertising. On the supply side, it attempted to control the production from mines that it did not own. It made deals with other producers to market their diamonds through DeBeers and share the profits. It undercut the prices of rogue producers who sold diamonds outside the DeBeers control by selling its stockpiles of such diamonds and driving down the price. It also purchased diamonds from other producers. [text: E p. 218; MI p. 218]